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Ref:DV190-01
August 3, 2001

TO: Environmental Quality Council, Capitol Building, Helena, 59620-1704
Dept. of Environmental Quality, Planning, Prevention & Assistance, PO Box 200901, Helena, 59620-0901
Dept. of Environmental Quality, Permitting Compliance, PO Box 200901, Helena, 59620-0901
Montana Fish, Wildlife & Parks: Director's Office – Chris Smith; Fisheries Division – Karen Zackheim; Legal Unit
MT Historical Society, State Historic Preservation Office, 225 North Roberts, Veteran's Memorial Building, Helena, 59620-1201
Montana State Library, 1515 East Sixth Ave., Helena, 59620-1800
Jim Jensen, Montana Environmental Information Center, PO Box 1184, Helena, 59624
George Ochenski, PO Box 689, Helena, 59624
Wayne Hirst, Montana State Parks Foundation, PO Box 728, Libby, 59923
Montana State Parks Association, PO Box 699, Billings, 59103
Joe Gutkoski, President, Montana River Action Network, 304 N 18th Ave., Bozeman, 59715
Rep. Verdell Jackson, 555 Wagner Lane, Kalispell, 59901-8079
Sen. Bob DePratu, PO Box 1217, Whitefish, 59937-1217
Rep. Aubyn Curtiss, PO Box 216, Fortine, 59918-0216
Sen. William Crismore, 237 Airfield Road S, Libby, 59923-8600
Flathead County Commissioners, 800 S Main, Kalispell, 59901
Lincoln County Commissioners, 512 California Avenue, Libby, 59923
Flathead County Library, 247 First Avenue E, Kalispell, 59901
Lincoln County Library, 220 W 6th Street, Libby, 59923
Glen Anacker, Trout Unlimited, PO Box 638, Kalispell, 59903-0638
Bruce Farling, Executive Director, MT Trout Unlimited, Box 7186, Missoula, 59807
Plum Creek Timber, Flathead Unit, PO Box 8990, Kalispell, 59904
Thad Briggs, PO Box 8062, Kalispell, 59901

Ladies and Gentlemen:

The enclosed Environmental Assessment (EA) has been prepared for the Eastern brook trout suppression project in Sheppard Creek (Stillwater watershed) (T30N, R25W S17, T30N, R26W, S13, 22, 23&24) in Flathead and Lincoln counties. The objective of the project is to suppress the Eastern brook trout for the purpose of relieving competitive pressure on the westslope cutthroat trout populations.

Questions and comments will be accepted through Sunday, September 2, 2001. Please direct your questions or comments to Beth Gardner, Tally Lake Ranger District, 1335 Hwy 93 West, Whitefish, MT 59937. (e-mail: bgardner@fs.fed.us)

Sincerely,

Daniel P. Vincent
Regional Supervisor

/nli
Enclosure

Draft

Montana Fish, Wildlife and Parks

490 N Meridian Road, Kalispell, MT 59901

Environmental Assessment

Project: Eastern brook trout suppression in Sheppard Creek (Stillwater watershed) to relieve competitive pressure on the westslope cutthroat trout populations.

Division: Fisheries Division

Description of Project: Eastern brook trout will be suppressed in these streams for at least 3 years with electrofishing removal. This action will benefit the remnant westslope cutthroat population.

POTENTIAL IMPACT ON THE PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats		X				X
2. Water quality, quantity & distribution				X		
3. Geology & soil quality, stability and moisture				X		
4. Vegetative cover, quantity & quality				X		
5. Aesthetics				X		
6. Air quality				X		
7. Unique, endangered, fragile or limited environmental resources		X				X
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		

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POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & sate tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreation and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution and density of population & housing				X		
10. Demands for government services				X		X
11. Industrial and commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flow				X		

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Other groups or agencies contacted or which may have overlapping jurisdiction: This project is sponsored by US Forest Service and permitted by Montana Fish, Wildlife and Parks under the authority of MCA 87-1-210.

List of all agencies and individuals who have been notified of this proposed transfer: Flathead National Forest and Thad Briggs (Olney, MT).

Individuals or groups contributing to this EA: Beth Gardner of the Flathead National Forest

Recommendation concerning preparation EIS: No EIS required. Action is expected to be minor.
EA prepared by: Beth Gardner, fisheries biologist (Flathead National Forest) in consultation with Montana Department of Fish, Wildlife and Parks.

Date: August 3, 2001

Comments will be accepted until: September 2, 2001

Comments should be sent to: Beth Gardner, Tally Lake Ranger District, 1335 Hwy 93 West, Whitefish, MT 59937. (e-mail: bgardner@fs.fed.us)

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ENVIRONMENTAL ASSESSMENT
WESTSLOPE CUTTHROAT TROUT RECOVERY
VIA EASTERN BROOK TROUT SUPPRESSION
IN SHEPPARD CREEK

I. DESCRIPTION OF PROPOSED ACTION

A. Description of water body and action:

Water	Drainage	County	Location	Miles of Suppression	Water Code
Sheppard	Stillwater	Flathead and Lincoln	T30N, R25W S17 T30N, R26W, S13, 22, 23&24	About 5 miles (includes small tributaries)	07-3900

Sheppard Creek is a tributary of the Logan Creek watershed, in the Stillwater drainage. The majority of the watershed is on National Forest system lands (Flathead National Forest), but some private land exists at the confluence of Sheppard Creek into Logan Creek. Also, Plum Creek Timber Company owns land in the extreme headwaters. The stream historically only contained a single fish species, the westslope cutthroat trout. Today westslope cutthroat trout are uncommon and in danger of extirpation from Sheppard Creek. Brook trout were stocked in the stream decades ago and are now abundant in Sheppard Creek and throughout the rest of the Stillwater watershed.

Brook trout compete with native cutthroat trout and are a serious threat to the long-term persistence of cutthroat trout in Sheppard Creek. Therefore, Forest Service workers will slightly modify the road culvert at FDR 538B (Sylvia Lake Road) to make it a barrier to further upstream colonization by brook trout. Then brook trout above the barrier will be removed and discarded by means of backpack electrofishing on 5 miles of the stream and its small tributaries. Most of the brook trout in upper Sheppard Creek are small (the average size is 4.9" in length and none are over 8" long (please see attachment). All cutthroat trout will be released unharmed near their capture site. Multiple pass removal efforts will take place in the month of September and an additional removal effort will take place in October that focuses on key brook trout spawning areas. The timing of the project is designed to minimize trauma to cutthroat trout, and electrofishing methods follow state protocol. No work is proposed for Sheppard Creek downstream of the culvert barrier (the remaining 14 miles of the stream).

B. Need for Action:

Pure westslope cutthroat trout are becoming increasingly rare and estimated to be currently found in just 2% of its historic range (McIntyre and Rieman 1995)(Liknes and Graham 1988). In the Logan Creek watershed cutthroat trout were estimated to be historically common or abundant on 125 miles of trout stream (89% of the watershed). Today, cutthroat trout are common or abundant on 27 miles of stream (19% of the watershed), most of which are the headwaters of Sheppard Creek and nearby Griffin Creek. Brook trout are found almost everywhere in the watershed (92.2% of fish habitat).

Cutthroat trout have lost ground due to competition with nonnative species, hybridization, habitat loss, and overfishing. They are a "Species of Special Concern" in Montana, and numerous agencies and conservation groups are working together to conserve the species (Montana Fish, Wildlife and Parks 1999). Recovery efforts like this are designed to safeguard the species from becoming listed under the Endangered Species Act. Sheppard Creek contains a genetically pure westslope cutthroat trout population that is in imminent danger due to the overwhelming presence of brook trout (see attachment).

Brook trout are not native to Montana. They utilize the same habitat year-round as cutthroat trout and negatively impact cutthroat trout. Recent studies have verified that juvenile cutthroat trout experience reduced growth rates when they dwell with the larger, more aggressive juvenile brook trout (Novinger and Rahel 1999). The competition is especially fierce in times of food limitations. Experience has found that once brook trout dominate a stream, cutthroat trout fade away and never reclaim the stream unless human intervention takes place. Therefore, brook trout suppression is needed immediately to protect and recover the native cutthroat trout in Sheppard Creek.

The upper Sheppard Creek cutthroat trout recovery project lies on public land and has a good chance for success. Similar projects in North Central Montana have been successful in reducing competition, and cutthroat trout responded with increased population size (Mike Enk, Lewis & Clark National Forest fisheries biologist, personal communication). There is no risk in creating a new barrier to fish passage on Sheppard Creek. No other native species utilizes Sheppard Creek (this is not a bull trout stream). There is no indication of a migratory cutthroat trout population that moves down to Logan Creek. Recreational angling is relatively light (see attachment). Anglers will still be able to pursue trout fishing on Sheppard Creek. About 5 miles of cutthroat trout fishing will be available above the barrier and about 14 miles of brook trout fishing available below the barrier.

This project will involve annual brook trout suppression for at least 3 years. It is highly unlikely that workers will be able to remove every last brook trout. This effort is designed to be an emergency effort to retain cutthroat trout in Sheppard Creek, but it is not likely to be a permanent solution. Knowledge gained in the next 3 years will be helpful in developing a long-term, permanent solution. This may involve an additional barrier about 2 miles downstream and chemical reclamation. Other options, such as continued suppression effort or abandonment, will be analyzed as well at that time (this EA only covers brook trout suppression via electroshocking).

II. IMPACTS OF THE PROPOSED ACTION

Please review the attached checklist. The impacts of this action are included in the Environmental Assessment checklist and the following text addresses the impacts.

A. Impacts to the Physical Environment

1) Terrestrial and Aquatic Life and Habitats

Brook trout numbers will be greatly reduced in the area of suppression. Brook trout are common throughout the Stillwater basin and all of Montana. This project will have

no effect on species survival. Information on brook trout size and distribution are available in the attachment.

7) **Unique, Endangered, Fragile or Limited Environmental Resources**

This proposed action should be beneficial to the cutthroat population. Westslope cutthroat trout is a Montana Species of Special Concern. Standard electrofishing methods will be followed to minimize trauma to cutthroat trout.

B. Impacts to the human environment

7) **Access to and Quality of Recreational Activities**

Angler harvest in Sheppard Creek should have only a minor effect. Recreational use of upper Sheppard Creek is considered light (see attached creel estimates). Anglers will still be able to harvest trout, it is just a switch from brook trout to cutthroat trout.

10) **Demands on Government Services**

This action will require a maximum of 20 calendar days to complete annually for each stream and will be undertaken by Forest Service personnel. Volunteers and Montana Conservation Corp personnel may also be used. Other fisheries projects may be postponed.

III. Discussion of Reasonable Alternatives

1) The **"No Action" Alternative** would result in a higher possibility that the cutthroat trout population in Sheppard Creek would become extinct. There would be no impacts on angler harvest.

2) The **"Relocate Brook Trout" Alternative** is different than the proposed action in that brook trout will be released alive into lower Sheppard Creek instead of disposed. This alternative is more time consuming than the proposed action due to the extra effort in handling and transporting brook trout (may take 5 additional days annually). This alternative could relieve any concern the public may have about killing a game species, but it will not improve angling. Most of the brook trout are too small due to overcrowding, and adding more fish downstream will only worsen the situation.

3) The **"Utilize Brook Trout Removed" Alternative** considers preserving larger-sized brook trout for local food banks instead of discarding them. The food banks are probably willing to accept cleaned, prepared fillets on larger fish. However, since the single largest brook trout measured (out of 213 individuals) was only 7.4" long, this would be very labor intensive and it would be challenging to preserve the fillets in a sanitary manner. There may be an opportunity to utilize volunteers to clean and prepare the fish.

IV. Environmental Assessment Conclusion Section

1) Is an EIS required? No. This action is expected to be minor and beneficial.

V. References

Liknes, G.A. and P.J. Graham. 1988. Westslope Cutthroat Trout in Montana: Life History, Status and Management. American Fisheries Society Symposium 4: 53-60.

McIntyre, J.D. and B.E. Reiman. 1995. Westslope cutthroat trout. Pages 1-15 in M.K. Young, editor. Conservation assessment for inland cutthroat trout. General Technical Report RM-256. Fort Collins, CO. U.S.D.A. Rocky Mountain Forest and Range Experimental Station.

Montana Department of Fish, Wildlife & Parks. 1999. Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout (Oncorhynchus clarki lewisi) in Montana. Helena, MT. 28 pp.

Novinger, D.C. and F.J. Rahel. 1999. Exploring Competitive Mechanisms that Allow Nonnative Brook Trout to Displace Native Cutthroat Trout in a Rocky Mountain Stream. Abstracts of American Fisheries Society 129th Annual Meeting, Charlotte, North Carolina. Pages 124-125.

Attachment:

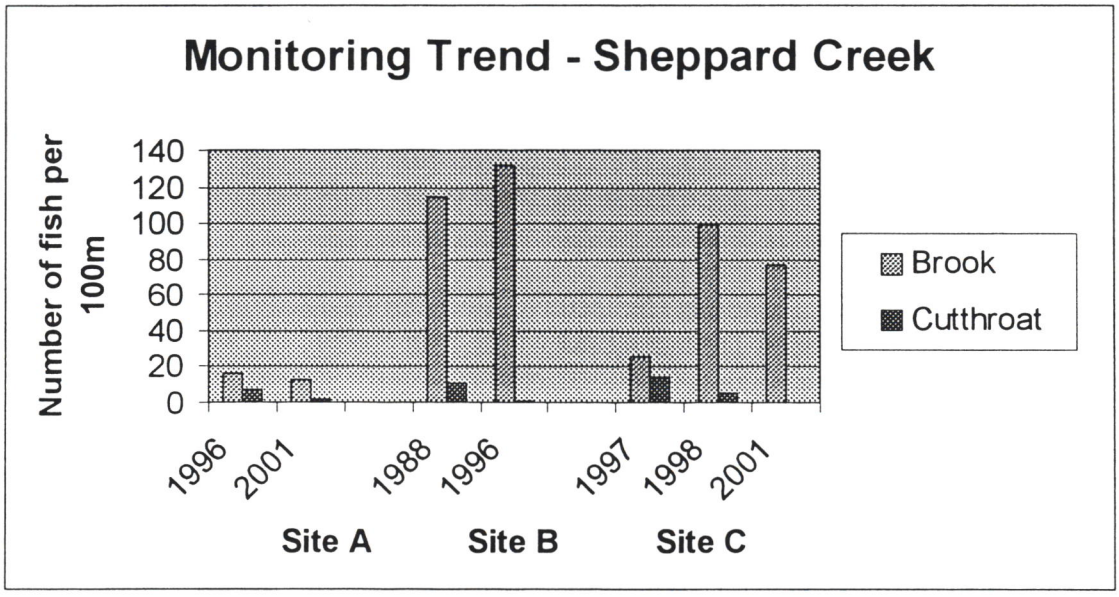
Population Data and Creel Estimates

No population data about Sheppard Creek is available prior to 1973. In 1973 a Forest Service fisheries biologist prepared a memo expressing how Sheppard Creek had "the best population of cutthroat trout in the Logan Creek drainage" while noting brook trout now dominate the other tributaries (but no raw data was preserved). From 1988 to 1996 the Forest Service and Montana Fish, Wildlife and Parks surveyed 10 locations scattered around Sheppard Creek and its unnamed tributaries. In general brook trout greatly outnumbered cutthroat trout in the lower portions of Sheppard Creek (157 brook trout to 10 cutthroat trout), but ranged from 2:1 to 11:1 brook trout per cutthroat trout in the upper 5 miles. At no location did cutthroat trout outnumber brook trout. This population data is available at the Tally Lake Ranger District (Flathead National Forest).

Three locations have been monitored to detect trends since 1996. While some natural fluctuation in population size is expected, all three locations exhibit further decline in cutthroat trout since 1996. This suggests that unless immediate action is taken, cutthroat trout may soon disappear from Sheppard Creek.

A. At the confluence of Sheppard Creek and an unnamed tributary from Conner Basin (section 23), a 1996 survey crew found 16 brook trout and 7 cutthroat trout in 100 meters of stream. This same location was monitored in 2001 and workers found 12 brook trout but only 2 cutthroat trout.
B. Immediately below the FDR 538B (Sylvia Lake Road) culvert, workers estimated 121 brook trout and 11 cutthroat trout per 100 meters of stream. This same area was resurveyed in 1996 and it was estimated that 122 brook trout but only 1 cutthroat trout.

C. About 1 mile downstream of FDR 53B culvert, snorkel population surveys estimated 26 brook trout and 14 cutthroat trout. This same area was resurveyed in 1997 and 99 brook trout were found but only 5 cutthroat trout. This was surveyed again in 2001 and 77 brook trout were found but absolutely no cutthroat trout.



Six population surveys have taken place in the project area (above FDR 538B culvert). Four were inventories and two have been repeat (monitoring) surveys at Location A described above. Over 200 brook trout and cutthroat trout were individually measured during these surveys. The average size of all brook trout measured was 12.55cm (4.9 inches) and the average size of all cutthroat trout measured was 13.56cm (5.3 inches). The single largest brook trout captured in these surveys was 19cm (7.4 inches).

Montana Fish, Wildlife and Parks statewide creel surveys indicate relatively low fishing pressure on Sheppard Creek (the entire stream). The following table, provided by Jim Vashro, regional fisheries manager, shows the results.

1989 – 55 angler days (annual)
1991 – 116 angler days
1995 – 40 angler days
1997 – 108 angler days, plus an additional 30 days on Dunsire Creek (a tributary of Sheppard)